

Application No. 10/649,164  
Paper Dated: March 28, 2007  
Appellants' Reply Brief  
Attorney Docket No. 4316-031612

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

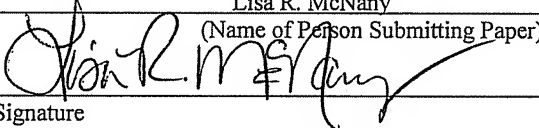
Appellants : David James Beale et al.  
Application No. : 10/649,164  
Confirmation No. : 4762  
Filed : August 27, 2003  
Title : ALUMINUM INGOT CASTING MACHINE  
Group Art Unit : 1725  
Examiner : Len Tran

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**REPLY BRIEF TO EXAMINER'S ANSWER PURSUANT TO 37 CFR §41.41(a)**

Sir:

The present paper represents a Reply Brief in response to the Examiner's Answer mailed on January 30, 2007 for the above-identified Appeal, a response to which is due by March 30, 2007. The Board is respectfully requested to consider this Reply Brief directed to four new points of argument raised in the Examiner's Answer.

I hereby certify that this correspondence is being submitted electronically to the United States Patent and Trademark Office on March 28, 2007.	
Lisa R. McNany	
(Name of Person Submitting Paper)	
	03/28/2007
Signature	Date

**I. Examiner's argument that phrase "substantially hollow" requires a new search**

The first new point of argument is with respect to the After Final Amendment of the addition of "substantially hollow" to the claims. On page 6, paragraph 1 of the Appeal Brief, the Examiner states that the after final amendment was not entered because the term "substantially hollow", as interpreted by the Examiner could be "a hollow" portion of the ring, i.e., a hollow "rail", "ring" or a hollow tube, which would require a new search. Appellants respectfully disagree with the Examiner's position. Each of the independent claims recites "a rotatable annular ring, said ring defining a space inside of said ring". The definition of an "annular ring" in and of itself describes a circular member or band of material defining a hollow portion. However, the specification further defines this annular ring at page 16, lines 17-19 which states that "In this specification "annular" means substantially hollow." The specification goes on to state on page 16, lines 19-23 that prior art mold carousels have typically been driven from at or near the center of the carousel ring, with the rings including drive arms extending inward to the drive means. By contrast, in the present invention, the ring is "annular", i.e., substantially hollow, meaning, *inter alia*, that no central drive arms rotate through the space inside the ring. The specification is also replete with references to the importance of this hollow portion within the annular ring. Accordingly, the definition of annular ring is clearly discussed throughout the specification. Rather than interpreting the claims in light of the specification, it appears that the Examiner is improperly reading the claims in a vacuum. *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983).

**II. Examiner's argument that Hunter teaches an annular space**

The second new point of argument is in response to Appellants' position that Hunter fails to teach an annular ring defining a space inside of the ring. The Examiner has included a Figure of the Hunter device on page 7 of the Examiner's Answer. The Examiner argues that the triangular portions on the annular ring meet the claimed limitation of an "annular ring defining a space inside of the ring". Appellants respectfully disagree with the Examiner's position. The claims recite an annular ring wherein the ring defines a space inside of the ring. These "triangular spaces" are on the ring itself, not inside of the ring. Furthermore, there is no teaching in Hunter that these triangular portions noted by the Examiner are "spaces". Hunter

does not comment on these triangular portions. Also, the Examiner continues to argue that since Hunter teaches a drive means (20) inside the ring and Appellants' Figure 1 teaches a drive means (47) inside the ring, Hunter teaches "substantially the same invention". Again, the Examiner is not interpreting the claims in light of the specification. In addition to the drive means (20), Hunter also teaches a pneumatic cylinder (100) mounted across the space in the middle of the ring, as well as, additional structure within the interior of the ring which would prevent one from achieving the advantages of a hollow ring structure discussed in detail throughout the specification.

### **III. Examiner's argument that Kikkawa et al. teaches the "gist" of the invention**

The third new point of argument is in response to Kikkawa et al. and the claimed feature of claim 11 of a Y-shaped launder. Claim 11 recites:

... /a/ Y-shaped launder, the launder having first and second receiving portions for receiving molten metal, the first receiving portion being positioned to receive molten metal from one of said crucibles and the second receiving portion being positioned to receive molten metal from another of said crucibles.

The Examiner acknowledges that Kikkawa et al. fails to teach the claimed limitation of a Y-shaped dispenser for receiving molten metal from two separate sources and feeding the molten metal into a single mold, but argues that the "gist" of the invention is using a Y-shaped dispenser and thus Kikkawa et al. teaches this aspect of the invention. Appellants respectfully disagree. Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement on analyzing the subject matter "as a whole". *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Claim 11 clearly recites the feature of a Y-shaped launder which allows for two separate sources of molten metal to be fed to a single mold position. As discussed in the specification at page 14, line 31, this particular feature allows for a substantially continuous flow of molten metal into the launder and the mold should one of the crucibles become empty. Kikkawa et al. teaches the exact opposite of the claimed invention and has no appreciation for the advantages that can be achieved by the design of the features of claim 11.

**IV. Examiner's argument that Worswick implicitly discloses a plurality of nozzles**

The fourth new point of argument is in response to Worswick. Worswick is applied in the rejection of claims 17, 19-20 and 27 as teaching a water sprayer cooling system including a plurality of nozzles. The Examiner argues that Worswick discloses in column 1, lines 10-13, "to spray the undersides of the molds with water" and, therefore, Worswick implicitly discloses a plurality of nozzles. Appellants respectfully disagree. Worswick discloses molds moving along a conveyor belt. As each mold moves past the water nozzle, the underside thereof is sprayed and thus, since a "plurality" of molds move past the water nozzle, a "plurality" of molds are subsequently sprayed. There is nothing in Worswick that discloses a plurality of nozzles.

**Conclusion**

In view of the foregoing and the arguments presented in Appellants' Appeal Brief, the pending claims define patentable subject matter over the cited documents. Reversal of the Examiner's rejections is therefore respectfully requested.

Any questions or comments regarding this Reply Brief should be directed to the Appellants' undersigned representative.

Respectfully submitted,

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